

DTV Construction Costs

– Incorporating information provided by the PBS DTV Strategic Services Group –

SECTION A. TRANSMISSION

ATSC TRANSMISSION EQUIPMENT

Item Description	Low VHF 4 kW	High VHF 8kW	UHF 1 2.5 kW	UHF 2 15 kW	UHF 3 60kW
ATSC television transmitter with filter and spares	600,00	731,500	369,400	519,000	1,000,000
TV broadcast antenna	208,300	208,300	175,000	200,000	254,500
Transmission line installed (1,500 ft – 3-1/8" and 6-1/8")	120,000	120,000	120,000	240,000	240,000
Dummy load	3,500	3,500	4,500	4,500	6,000
Tower, 1,500 ft, guyed with strobe lights (65 lb wind load — ½" ice)	1,800,000	1,800,000	1,800,000	1,800,000	1,800,000
Tower foundation	200,000	200,000	200,000	200,000	200,000
Tower installation	300,000	300,000	300,000	300,000	300,000
Test package, includes RF Analyzer, Transport Stream (TS) Analyzer, DTV Demod., power and A/V monitoring	100,000	100,000	100,000	100,000	100,000
Frequency Reference System	3,500	3,500	3,500	3,500	3,500
Studio monitoring (includes DTV Demod w/TS output, TS Analyzer and A/V monitoring)	50 ,000	50,000	50,000	50,000	50,000
Digital or Dual System STL (hot standby w/changeover; 500 ft line, 6 ft antennas)	150,000	150,000	150,000	150,000	150,000
Digital microwave interconnect (500 ft line, 6 ft antennas)	70,000	70,000	70,000	70,000	70,000
STL Tower — 100 ft, installed	47,000	47,000	47,000	47,000	47,000
XMTR remote control	25,000	25,000	25,000	35,000	35,000

Line dehydrator system	3,000	3,000	3,000	3,000	3,000
AC Power installation	15,000	25,000	15,000	25,000	30,000
Power regulation & Surge suppression	5,000	10,000	5,000	10,000	10,000
Ducting & forced air system	10,000	25,000	10,000	25,000	25,000
Installation materials – miscellaneous: wire, strap	5,000	10,000	5,000	10,000	10,000
Equipment racks, complete	3,500	3,500	3,500	3,500	3,500
RF parts (patch panel, elbows)	7,500	10,000	7,500	10,000	10,000
Directional couplers for power measurement	7,500	10,000	7,500	10,000	10,000
XMTR Proof-of-Performance	5,000	10,000	10,000	10,000	10,000
RF combiner for N+1 or N-1	50,000	50,000	50,000	50,000	75,000

NTSC TRANSMISSION EQUIPMENT

Item Description	Low VHF 30 kW	High VHF 45 kW	UHF 60 KW
NTSC Transmitter w/diplexer, spare parts, and spare final tube(s)	540,000	735,000	850,000
NTSC antenna, including installation	225,000	250,000	300,000
Transmission line (1,000 ft) (VHF – 3-1/8", UHF – waveguide)	58,320	58,320	175,000
Power installation, regulation	50,000	50,000	50,000
Stereo and SAP generator & processor	24,500	24,500	24,500
Multi-channel audio modulation monitor	14,000	14,000	14,000
Video processing amplifier	6,500	6,500	6,500
Waveform/Vectorscope/Switcher	10,500	10,500	10,500
Demodulator w/down converter, antenna, and line	23,500	23,500	23,500

SECTION B. MASTER CONTROL

These models provide for (1) single-channel, standard definition (SD) simulcast per FCC requirements, and (2) 4-channel SD multicast. The single channel is applicable to stations intending to implement the minimum configuration.

Both models include pass-through of PBS DTV network programming.

ATSC EQUIPMENT

Item Description	Model #1 – 1 Ch SD	Model #2 – 4 Ch Multicast
Satellite antenna for PBS DTV feed	5,000	5,000
Satellite demodulator(s) for PBS feed	7,500 (Quan 1)	30,000 (Quan 4)
Single or Multichannel server	75,000 (See Note 1)	150,000 (See Note 2)
Routing/switching system	35,000 (Simple)	250,000
Identification system ("bug") inserter - video	5,000	20,000
Analog – Digital converter	10,000	40,000
ATSC Encoder – Standard definition (SD)	25,000	100,000
Encoder controller	20,000	20,000
Noise reducer	7,500	30,000
Data multiplexing system	20,000	20,000
Captioning system for ATSC	10,000	40,000
PSIP generator	5,000	25,000
Digital SD videotape recorders (Quan. 4)	140,000	140,000
Test and monitoring system (2 serial component measurement sets – 17,000; 16x9 line monitor – 18,000; off-air receiver – 6,000; digital scope – 14,000)	55,000	55,000
Master control terminal gear (Distribution amps, monitors, patching, processors)	20,000	25,000
Miscellaneous installation materials	15,000	20,000

Note 1: Provides 24-hour record/playback capacity.

Note 2: PTFP currently limits server funding to \$150,000 for a basic system that can be reconfigured for multichannel use with expansion in the future.

NTSC MASTER CONTROL EQUIPMENT

Item Description	Price
Master control video switcher	75,000
Processing amplifier for NTSC	8,500
30 video distribution/SDI amps with rack frame and p/s	20,000
60 audio distribution amps with p/s and rack frame	25,000
Dual sync generator w/changeover and pulse distribution	20,000
NTSC off-air demodulator with antenna and line	25,500
EAS receiver and encoder/decoder	6,000
Component waveform/vectorscope	8,500